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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,799	11/17/2003	Michael J. Massingill	03-KST/102	2935

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EXAMINER

VALENTI, ANDREA M

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,799

Applicant(s)

MASSINGILL ET AL.

Examiner

Andrea M. Valenti

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-28 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-14, 16-18, 21-28 is/are rejected.
- 7) ☒ Claim(s) 4,5,19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-14 and 16-28, drawn to scalable fish rearing raceway, classified in class 119, subclass 215.
- II. Claim 15, drawn to fish rearing system having a passive dead and dying fish removal apparatus, classified in class 119, subclass 216.

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention II has separate utility such as a filtration means. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Richard Clarke on 19 July 2004 a provisional election was made without traverse to prosecute the invention of Group 1, claims 1-14 and 16-28. Affirmation of this election must be made by applicant in replying to this Office action. Claim 15 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is too long exceeding 25 lines in length and contains legal phraseology 'means' in the 4th line. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-10, 13, 14, 16-18, 21-25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,593,647 to Sorgeloos et al in view of U.S. Patent No. 4,086,875 to Lindbergh and U.S. Patent No. 6,117,313 to Goldman.

Regarding Claims 1, 10, 16, and 25, Sorgeloos et al teaches a scalable fish rearing raceway system comprising: (a) one or more fish containment structures having two or more parallel linear fish channels with semi-circular end sections (Sorgeloos Fig.1 #5); (b) water intake means, water outflow means, water propulsion means, water

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circulation means, and water velocity control means, all in fluid communication with said fish containment structure (Sorgeloos Col. 4 line 63 and 67 and Col. 5 line 12-20); (c) fish harvesting/grading means further comprising a fish harvesting/grading channel in fluid communication with said fish containment structure (Sorgeloos Col. 5 line 49-57);

Sorgeloos is silent on one or more passive dead and dying fish removal means, whereby isolating dead or submerged dead or dying fish are continuously removed from said fish containment structure passively employing water current. However, Goldman teaches a passive dead and dying fish removal means (Goldman abstract line 8 and col. 3 line 45-48). It would have been obvious to one of ordinary skill in the art to modify the teachings of Sorgeloos with the teachings of Goldman at the time of the invention to prevent the spread of disease as taught by Goldman (Goldman Col. 1 line 50-55).

Sorgeloos as modified is silent on an integrated fish sizing and separation means, whereby fish of different sizes are separated out for either retention in said fish containment structure for further growth, or transferral to said fish harvesting/grading channel for removal from said fish containment structure. However, Lindbergh teaches an integrated fish sizing and separation means (Lindbergh Fig. 1 and Col. 1 line 5-65). It would have been obvious to one of ordinary skill in the art to modify the teachings of Sorgeloos with the teachings of Lindbergh at the time of the invention since fish grading is an old and notoriously well-known element in fish rearing systems and supplying a grading barrier at particular location in the system is an obvious means of organizational and efficient operational management of the system to separate sick fish, oversized or undersized fish or different varieties of fish.

Sorgeloos as modified teaches a fish feed dispensing means and water quality conditions monitoring means (Sorgeloos Col. 5 line 22-25), but is silent on it being an electronic and microprocessor controlled. However, it would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention since the modification is merely the automation of a previously manual operation and does not present a patentably distinct limitation [*In re Venner*, 262 F.2d 91, 95 120 USPQ 192, 194 (CCPA 1958)].

Regarding claims 2 and 17, Sorgeloos as modified teaches the fish containment structure having two or more parallel linear fish channels with semi-circular ends (Sorgeloos Fig. 1 #5 and 24), includes a centrally located inner portion for housing or supporting said water propulsion means (Sorgeloos #13) and said dead and dying fish removal means (Goldman #18).

Regarding Claims 3 and 18, Sorgeloos teaches the fish harvesting/grading channel in fluid communication with said fish containment structure includes fish passageways between said harvesting/grading channel and fish containment means (Sorgeloos #41) and insertable mesh or bar barriers (Sorgeloos #39) which selectively allow fish of varying size to pass into said harvesting/grading channel, but is silent on the solid barrier. However, it would have been obvious to modify the teachings at the time of the invention to prevent passage of fish during routine maintenance procedures.

Regarding Claims 6, 7, 21 and 22, Sorgeloos as modified teaches a water propulsion means includes one or more water propulsion pumps configured in conventional U-tube water return structures (Sorgeloos #28 and #13 and Goldman title

page, right hand column, first citation under Other Publications). The is modification is merely the an engineering design choice involving the selection of a known alternate equivalent propulsion means to meet certain engineering design parameters.

Regarding Claims 8 and 23, Sorgeloos as modified is silent on the fish containment structure includes two or more fish containment structures each having three or more parallel linear fish channels with semi-circular end sections and a common inner dividing wall. However, it would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention since the modification is merely the duplication of a known part for a multiple effect to accommodate more fish while using an efficient use of space and does not present a patentably distinct limitation.

Regarding Claims 9 and 24, Sorgeloos as modified teaches the fish production raceway zones includes one or more particulate removal means, said particulate removal means further comprising a screened drain box located in the floor of said fish production raceway zone (Goldman Fig. 4 and Sorgeloos #8).

Regarding Claims 13 and 28, Sorgeloos as modified teaches the water velocity control means (Sorgeloos #13) includes a series of water jets located on the floor of said fish containment structure, but is silent on it having a baffle means adjustably mounted in the floor of the raceway in front of the said jets, whereby the angle of said baffle means is varied to regulate water velocity within said fish containment structure. However, Goldman teaches that it is old and notoriously well-known to use baffles in fish rearing systems to control or divert flow (Goldman #72). It would have been

obvious to one of ordinary skill in the art to modify the teachings of Sorgeloos at the time of the invention in order direct the flow of water in the system as a operation control feature to meet the needs of the fish in containment. This modification is merely a rational combination of known devices.

Regarding Claim 14, Sorgeloos as modified teaches the water velocity control means further includes adjustable floor spoilers which can be lowered and raised to more accurately control and optimize the water velocity within the fish rearing zones (Sorgeloos #28).

Claims 11 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,593,647 to Sorgeloos et al in view of U.S. Patent No. 4,086,875 to Lindbergh and U.S. Patent No. 6,117,313 to Goldman as applied to claim 2 above, and further in view of U.S. Patent No. 5,820,759 to Stewart et al.

Regarding Claims 11 and 26, Sorgeloos is silent on the central portion of said fish containment structure includes a water treatment zone which houses and supports effluent wastewater treatment means. However, Stewart et al teaches an aquaculture system containing wastewater treatment (Stewart #935). It would have been obvious to one of ordinary skill in the art to modify the teachings of Sorgeloos with the teachings of Stewart at the time of the invention to meet environmental effluent discharge requirements. Locating the treatment means in the central portion is merely shifting the location for an efficient use of space and does not present a patentably distinct limitation.

Claims 12 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,593,647 to Sorgeloos et al in view of U.S. Patent No. 4,086,875 to Lindbergh and U.S. Patent No. 6,117,313 to Goldman as applied to claim 1 above, and further in view of U.S. Patent No. 5,320,068 to Redditt.

Regarding Claims 12 and 27, Sorgeloos as modified is silent on a water circulation means includes conventional water paddlewheels located at the surface of the water which both cause water flow and removal of CO₂ from water. However, Redditt teaches a paddlewheel located in an aquaculture system (Redditt Col. 9 line 63). It would have been obvious to one of ordinary skill in the art to modify the teachings of Sorgeloos with the teachings of Redditt at the time of the invention for the aeration advantages as taught by Redditt.

Allowable Subject Matter

Claims 4, 5, 19, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 3,661,119; U.S. Patent No. 5,820,759; U.S. Patent No. 6,447,681; Japanese Patent JP 04135434; U.S. Patent No. 4,394,846; U.S. Patent No. 6,041,738; Japanese Patent JP 62068591; and U.S. Patent No. 5,353,746

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Andrea M. Valenti
Examiner
Art Unit 3643

22 July 2004


Peter M. Poon
Supervisory Patent Examiner
Technology Center 3600